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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,775	01/18/2001	Taisuke Sagara	088941/0178	5956

22428 7590 06/05/2003

FOLEY AND LARDNER
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WASHINGTON, DC 20007

EXAMINER

TRAN, TRANG U

ART UNIT	PAPER NUMBER
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2614.

DATE MAILED: 06/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/761,775

Applicant(s)

SAGARA, TAISUKE

Examiner

Trang U. Tran

Art Unit

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figure 6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-4 are rejected under 35 U.S.C. 102(e) as being anticipated by Aratani et al (US Patent No. 6,538,675 B2).

In considering claim 1, Aratani et al discloses all the claimed subject matter, note 1) the claimed first to N-th (N is an integer more than 2) image format conversion devices for generating and outputting first to N-th images after converting said image data into predetermined image formats is met by the display format conversion portions 3-1, 3-2, 3-3 and 3-4 (Fig. 1, col. 4, lines 42-55).

In considering claim 2, Aratani et al discloses all the claimed subject matter, note 1) the claimed first to N-th decoding devices which convert input first to N-th image

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coded data for generating and outputting first to N-th image data by decoding said first to N-th image coded data is met by the input portions 2-1, 2-2, 2-3 and 2-4 (Fig. 1, col. 4, lines 8-41), and 2) the claimed first to N-th image format conversion devices for generating and outputting first to N-th image data by converting any of said image data from among said first to N-th image data into respective predetermined image formats is met by the display format conversion portions 3-1, 3-2, 3-3 and 3-4 (Fig. 1, col. 4, lines 42-55).

In considering claim 3, the claimed wherein the image decoding apparatus comprises a distribution control apparatus for distributing any of the image data among first to N-th image data respectively to first to N-th image format conversion devices, in response to a request of said first to N-th image format conversion device is met by the control portion 6 (Fig. 1, col. 4, line 56 to col. 5, lines 19).

In considering claim 4, the claimed wherein at least one of said first to N-th image coded data is input through a PCI (Peripheral Component Interconnect) bus is met by the bus interface 4 (Fig. 1, col. 4, lines 42-55).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aratani et al (US Patent No. 6,538,675 B2).

In considering claim 7, Aratani et al disclose all the limitations of the instant invention as discussed in claim 1 above, except for providing the claimed wherein at least one of said image format conversion devices among said first to N-th image format conversion devices generates an image converted into a format composed of 1920 pixels in the horizontal direction and 1080 lines in the vertical direction, and at least one of said image format conversion devices generates an image converted into a format composed of 720 pixels in the horizontal direction and 480 lines in the vertical direction. The capability of using format conversion from 1920x1080 to 720x480 is old and well known in the art. Therefore, the Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known format conversion from 1920x1080 to 720x480 into Aratani et al's system in order to convert the input image to suitable display format so that the video signal can be displayed on televisions having different aspect ratios.

In considering claim 8, Aratani et al disclose all the limitations of the instant invention as discussed in claim 2 above, except for providing the claimed wherein at least one of said decoding device and said first to N-th image format conversion devices are formed on the same semiconductor integrated circuit substrate. The capability of using decoding device and the first to N-th image format conversion devices are formed on the same semiconductor integrated circuit substrate is old and well known in the art. Therefore, the Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known decoding device and the first to N-th image format conversion devices are formed on the same

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semiconductor integrated circuit substrate into Aratani et al's system in order to reduce the size of the system.

6. Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Aratani et al (US Patent No. 6,538,675 B2) in view of Han (US Patent No. 6,175,387 B1).

In considering claim 5, Aratani et al discloses all the claimed subject matter, note 1) the claimed wherein the image decoding apparatus comprises: an image synchronizing signal generation device for generating and outputting a first vertical image synchronizing signal used for outputting said image by any one of the image format conversion devices among said first to N-th image format conversion devices is met by the input portions 2-1, 2-2, 2-3 and 2-4 (Fig. 1, col. 4, lines 8-41). However, Aratani et al explicitly does not disclose the claimed first to M-th (M: an integer equal to N-1) image synchronizing signal generating and synchronization adjusting devices for generating and outputting the second to the N-th vertical image synchronizing signals respectively in synchronization with said first vertical image synchronizing signal by said image format conversion devices other than said one of the image format conversion device. Han teaches that to interface the first video signal and the second video signal using the same port, a synchronization converter adjusts a difference between the sync signal of the second video signal to coincide with the sync signal of the first video signal and to correspond to the effective data (Fig. 4, col. 2, line 45 to col. 3, line 44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the a synchronization converter as taught by Han into Aratani et

al's system in order to increase the flexibility of the system by providing the video system with video signals having different video formats.

In considering claim 6, the claimed wherein said first to M-th image synchronizing signal generating and synchronization adjusting devices comprise: a counter for generating any one of said second to N-th vertical image synchronizing signals generated and output respectively by said first to M-th image synchronizing signal generating and synchronization adjusting devices and a counter control device for controlling the operation of said counter based on said first vertical image synchronizing signal is met by the sync converter 40 which includes a counter 42 counting synchronously with an external signal clock (Fig. 6, col. 3, line 59 to col. 4, line 44) of Han.

7. Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted applicant's prior art (Fig. 6) in view of Aratani et al (US Patent No. 6,538,675 B2) and further in view of Han (US Patent No. 6,175,387 B1).

In considering claim 9, the admitted applicant's prior art (Fig. 6) discloses all the claimed subject matter, note 1) the claimed a decoding device for generating an image data by decoding input image coded data, and for storing the thus generated image data in an externally installed memory device is met by the MPEG decoding portion 1 and the external memory portion 12 (Fig. 6, page 2, lines 1-9), 2) the claimed a decoded data reading device for reading said image data stored in said memory device in response to an inputting decoded data request signal and for outputting as the decoded data is met by the decoded data reading portion 2 (page 2, lines 9-12), 3) the claimed

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an image synchronizing signal generation device for generating and outputting a first horizontal image synchronizing signal and a first vertical image synchronizing signal is met by the image synchronization signal generating portion 4 (page 2, lines 14-19), and 4) the claimed a first image format conversion device for generating a first image by converting said input decoded data signal into a predetermined image format, and for outputting said first image after synchronizing with said first horizontal image synchronizing signal and said first vertical image synchronizing signal is met by the image format converting portion 3 (page 2, lines 12-25).

However, the admitted applicant's prior art explicitly does not disclose: 1) the claimed an image synchronizing signal generating and synchronization adjusting device for generating and outputting a second horizontal image synchronizing signal and a second vertical image synchronizing signal, which is synchronized with said first vertical image synchronizing signal, and 2) the claimed a second image format conversion device for generating a second image by converting said inputting decoded data signal into a predetermined image format, and for outputting said second image after synchronizing with said second horizontal image synchronizing signal and said second vertical image synchronizing signal.

1) Han teaches that to interface the first video signal and the second video signal using the same port, a synchronization converter adjusts a difference between the sync signal of the second video signal to coincide with the sync signal of the first video signal and to correspond to the effective data (Fig. 4, col. 2, line 45 to col. 3, line 44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

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invention to incorporate the a synchronization converter as taught by Han into the admitted applicant's prior art's system in order to increase the flexibility of the system by providing the video system with video signals having different video formats.

2) Aratani et al teach that reference numerals 3-1, 3-2, 3-2 and 3-4 represent a display format conversion portion (hereinafter called a "display format conversion portion3") for converting a display format (the numbers of display lines, dots and colors) of image data received at the input portion 2, under control of a control portion 6 (Fig. 1, col. 4, lines 42-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the display format conversion as taught by Aratani et al into the admitted applicant's prior art's system in order to increase the flexibility of the system by providing the video system with video signals having different video formats.

In considering claim 10, the admitted applicant's prior art (Fig. 6) discloses all the claimed subject matter, note 1) the claimed a first decoding device for generating a first image data by decoding input first image coded data and for storing the generated first image data in an externally installed memory device is met by the MPEG decoding portion 1 and the external memory portion 12 (Fig. 6, page 2, lines 1-9), 2) the claimed a decoded data reading device for reading said first or second image data stored in said memory device in response to an inputting first decoded data request signal and for reading said first or second image data stored in said memory device in response to an inputting second decoded data request signal and for outputting multiplexed decoded data prepared by multiplexing said first or second image data is met by the decoded

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data reading portion 2 (page 2, lines 9-12), 3) the claimed an image synchronizing signal generation device for generating a first horizontal image synchronizing signal and a first vertical image synchronizing signal is met by the image synchronization signal generating portion 4 (page 2, lines 14-19), and 4) the claimed a first image format conversion device, which outputs a first decoded data request signal for generating a first image by converting said input decoded data signal into a predetermined image format and for outputting said first image after synchronizing with said first horizontal image synchronizing signal and said first vertical image synchronizing signal is met by the image format converting portion 3 (page 2, lines 12-25).

However, the admitted applicant's prior art explicitly does not discloses: 1) the claimed an image synchronizing signal generating and synchronization adjusting device for generating and outputting a second horizontal image synchronizing signal and a second vertical image synchronizing signal, 2) the claimed a second decoding device for generating a second image data by decoding an input second image coded data, and for storing the generated second image data in an externally-installed memory device, 3) the claimed a distribution control device for distributing said multiplexed decoded signal to a first decoded data signal corresponding to said first decoded data request signal and a second decoded data signal corresponding to said second decoded data request signal, and 4) the claimed a second image format conversion device which outputs a second decoded data signal for generating a second image by converting said inputting decoded data signal into a predetermined image format, and

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for outputting said second image after synchronizing with said second horizontal image synchronizing signal and said second vertical image synchronizing signal.

1) Han teaches that to interface the first video signal and the second video signal using the same port, a synchronization converter adjusts a difference between the sync signal of the second video signal to coincide with the sync signal of the first video signal and to correspond to the effective data (Fig. 4, col. 2, line 45 to col. 3, line 44).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the a synchronization converter as taught by Han into Aratani et al's system in order to increase the flexibility of the system by providing the video system with video signals having different video formats.

Aratani et al teach that:

2) Television signals received by an antenna 209 are detected and frequency-modulated by television tuners 205 to 208, each encoder 201 to 204 decodes television signals having a standard signal format such as NTSC, PAL and SECAM into composite video signals and sound signals (Fig. 5, col. 12, lines 17-46).

3) Reference numeral 5 represents a bus controller for receiving image data output from each bus interface portion 4 and image data output from a frame memory controller 7 and a superposition data controller 8 and for arbitrating transfer of the image data in accordance with a priority order upon reception of a transfer request from these controllers (Fig. 1, col. 4, lines 49-55).

4) Reference numerals 3-1, 3-2, 3-2 and 3-4 represent a display format conversion portion (hereinafter called a "display format conversion portion3") for

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converting a display format (the numbers of display lines, dots and colors) of image data received at the input portion 2, under control of a control portion 6 (Fig. 1, col. 4, lines 42-55).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the second decoder, the controlling distribution of the first and second images and the display format conversion as taught by Aratani et al into the admitted applicant's prior art's system in order to increase the flexibility of the system by providing the video system with video signals having different video formats.

In considering claim 11, the combination of the admitted applicant's prior art, Aratani et al and Han disclose all the limitations of the instant invention as discussed in claim 2 above, except for providing the claimed wherein at least said decoding device, said image synchronizing signal generating device, said image synchronizing signal generating and synchronization adjusting device, said image format conversion device, and said second image format conversion device are formed on a semiconductor integrated circuit substrate. The capability of using decoding device, image synchronizing signal generating device, image synchronizing signal generating and synchronization adjusting device, image format conversion device, and second image format conversion device are formed on the same semiconductor integrated circuit substrate is old and well known in the art. Therefore, the Official Notice is taken. It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the old and well known decoding device, image synchronizing signal generating device, image synchronizing signal generating and synchronization adjusting

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device, image format conversion device, and second image format conversion device are formed on the same semiconductor integrated circuit substrate into the combination of the admitted applicant's prior art, Aratani et al and Han's system in order to reduce the size of the system.

Claim 12 is rejected for the same reason as discussed in claim 9.

Claim 13 is rejected for the same reason as discussed in claim 10.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Zhu et al (US Patent No. 6,069,664) disclose method and apparatus for converting a digital interlaced video signal from a film scanner to a digital progressive video signal.

Sinclair et al (US Patent No. 6,177,946 B1) disclose method and apparatus for processing video data and graphics data by a graphic controller.

Penney (US Patent No. 5,325,131) discloses multiformat television switcher.

Tanaka et al (US Patent No. 6,175,682 B1) discloses high-speed filing system.

Lyu (US Patent No. 5,801,777) discloses device and method for decoding digital video data.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Trang U. Tran** whose telephone number is **(703) 305-0090**.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **John W. Miller**, can be reached at **(703) 305-4795**.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231


or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

TT TT
May 29, 2003


JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600